

IN THE CLAIMS:

The following is a complete listing of the claims in this application, reflects all changes currently being made to the claims, and replaces all earlier versions and all earlier listings of the claims:

Claims 1-15 (Canceled)

Claim 16 (Currently Amended): A printer comprising:

a control unit having a first memory for storing image data with a first orientation generated based on print data received from an external apparatus and a transfer unit for performing DMA-transferring of the image data with the first orientation read from the first memory; and

an engine unit having a second memory for storing the image data received from said control unit and a print engine for printing the image data stored in said second memory,

wherein said transfer unit includes a third memory for storing the image data with the first orientation read from the first memory, and reads the image data from said third memory as image data with a second orientation for performing image rotation and transfers the read image data with the second orientation to said second memory, and

wherein said third memory is connected to said second memory through a first bus, said first memory is connected to said third memory through a second bus, and said second memory is connected to said print engine through a third bus.

Claim 17. (Previously Presented): A printer according to claim 16, further comprising a parallel interface for connecting said control unit and said engine unit to each other.

Claim 18. (Previously Presented): A printer according to claim 16, wherein said transfer unit includes a plurality of the third memories and wherein said transfer unit transfers one body of image data from one of the plurality of third memories to said second memory, while other image data from said first memory is stored in another of the plurality of third memories.

Claim 19. (Currently Amended): A control method carried out in a printer that comprises a control unit having a first memory for storing image data with a first orientation generated based on print data received from an external apparatus and a transfer unit for performing DMA-transferring of the image data with the first orientation read from the first memory, and an engine unit having a second memory for storing the image data received from the control unit and a print engine for printing the image data stored in the second memory, said method comprising:

a storing step of storing the image data with the first orientation read from the first memory in a third memory; and

a controlling step of reading the image data from the third memory as image data with a second orientation for performing image rotation and transferring the read image data with the second orientation to the second memory, and

wherein said third memory is connected to said second memory through a first

bus, said first memory is connected to said third memory through a second bus, and said second memory is connected to said print engine through a third bus..

Claim 20. (Previously Presented): A method according to claim 19, wherein the printer further comprises a parallel interface for connecting the control unit and the engine unit to each other.

Claim 21. (Previously Presented): A method according to claim 19, wherein the printer includes a plurality of the third memories, and wherein said transferring step transfers one image data from one of the plurality of third memories to the second memory, while said storing step stores another image data from the first memory in another of the plurality of third memories.

Claim 22. (Currently Amended): A printer comprising:
a control unit having a first memory for storing image data ~~for a portrait print sheet~~ with a first orientation generated based on print data received from an external apparatus and a transfer unit for performing DMA-transferring of the image data ~~for the portrait print sheet~~ with the first orientation read from said first memory; and
an engine unit having a second memory for storing the image data received from said control unit and a print engine for printing the image data stored in said second memory,

wherein said transfer unit includes a third memory for storing the image data for the portrait print sheet with the first orientation read from said first memory, and, in accordance with a print sheet, reads the image data from said third memory as image data for a landscape print sheet with a second orientation and transfers the read image data for the landscape print sheet with the second orientation to said second memory ~~without transferring the~~ read image data to said first memory if printing is performed on a landscape print sheet, and or reads the image data from said third memory as image data for the portrait print sheet with the first orientation and transfers the read image data for the portrait print sheet with the first orientation to said second memory if printing is performed on a portrait print sheet, and wherein said third memory is connected to said second memory through a first bus, said first memory is connected to said third memory through a second bus, and said second memory is connected to said print engine through a third bus.

Claim 23. (Previously Presented): A printer according to claim 22, further comprising a parallel interface for connecting said control unit and said engine unit to each other.

Claim 24. (Previously Presented): A printer according to claim 22, wherein said transfer unit includes a plurality of said third memories and wherein said transfer unit transfers one body of image data from one of the plurality of third memories to said second memory, while other image data from said first memory is stored in another of the plurality of third memories.

Claim 25. (Previously Presented): A printer according to claim 22, wherein said engine unit informs said control unit whether the rotation is required.

Claim 26. (Currently Amended): A control method carried out in a printer that comprises a control unit having a first memory for storing image data ~~for a portrait print sheet~~ with a first orientation generated based on print data received from an external apparatus and a transfer unit for performing DMA-transferring of the image data ~~for the portrait print sheet~~ with the first orientation read from the first memory, and an engine unit having a second memory for storing the image data received from the control unit and a print engine for printing the image data stored in the second memory, said method comprising:

a storing step of storing the image data ~~for the portrait print sheet~~ with the first orientation read from the first memory in a third memory;

a transferring step of, in accordance with a print sheet, reading the image data from the third memory as image data ~~for a landscape print sheet~~ with a second orientation and transferring the read image data ~~for the landscape print sheet~~ with the second orientation to the second memory ~~without transferring the read image data to the first memory if printing is performed on a landscape print sheet, and~~ or reading the image data from the third memory as image data ~~for the portrait print sheet~~ with the first orientation and transferring the read image data ~~for the portrait print sheet~~ with the first orientation to the second memory ~~if printing is performed on a portrait print sheet, and~~

wherein said third memory is connected to said second memory through a first bus, said first memory is connected to said third memory through a second bus, and said second

memory is connected to said print engine through a third bus.

Claim 27. (Previously Presented): A method according to claim 26, wherein the printer further comprises a parallel interface for connecting the control unit and the engine unit to each other.

Claim 28. (Previously Presented): A method according to claim 26, wherein the printer includes a plurality of the third memories, and wherein said transferring step transfers one body of image data from one of the plurality of third memories to the second memory, while said storing step stores other image data from the first memory in another of the plurality of third memories.

Claim 29 (Previously Presented): A method according to claim 26, further comprising the step of informing from the engine unit to the control unit whether the rotation is required.